

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of:	Von Behren, et al	Conf. No.:	4525
Application No.:	USSN 10/528,317	Docket No.:	60287-USA
Filed:	November 14, 2005	Examiner:	Sheikh, Humera N.
Art Unit:	1615		

For: COSMETIC COMPOSITION CONTAINING MICROCRYSTALLINE  
CELLULOSE

**Declaration Under 37 C.F.R. § 1.132**

I, W. Preston Brawn, declare as follows:

**I. Background**

A. I graduated from Southern Maine Technical College in 1969 with a major in marine science and have been employed in this field since November, 1969. I have worked for FMC for over forty years and have significant experience in the research and development, as well as commercialization, of hydrocolloids, microcrystalline cellulose, and products containing such hydrocolloids such as sunscreens. Much of my experience has been in a variety of technical roles including laboratory management positions. My current title is Business Manager – Personal Care Ingredients.

B. I am familiar with USSN 10/528,317 and the invention claimed and described therein.

C. The following comparative testing was carried out under my direction.

## II. Experimental work performed

A. The following comparative testing was performed in order to demonstrate the differences in non-aerosol spray devices at varying use levels between compositions containing coprocessed microcrystalline cellulose (“MCC”) and carboxymethylcellulose (“CMC”) as compared to compositions using dry mixtures of MCC and CMC.

B. A direct, side-by-side comparison was conducted for compositions containing 0.2%, 1% and 3% by weight of the rheology control agent (coprocessed versus dry blend) as set forth in the Tables immediately below.

C. 0.2% Co-processed vs. Dry Blend

Formulation Example	1	2
<b>Phase A</b>		
Water	79.4	79.4
Propylene Glycol	5.0	5.0
Avicel PC 611 (coprocessed MCC and CMC)	0.2	-
Dry Blend (MCC+CMC)	-	0.2
<b>Phase B</b>		
C12-15 Alkyl Benzoate	5.0	5.0
Panthenol	0.5	0.5
Cyclomethicone	3.0	3.0
Cetearyl Alcohol	0.5	0.5
Glyceryl Stearate	3.0	3.0
Oleth 20	2.5	2.5
<b>Phase C</b>		
Fragrance	0.1	0.1
Preservative	1.0	1.0

The Procedure:

*Part A:* The Avicel PC 611 and dry blend of MCC/CMC were dispersed into the water using high shear (i.e., rotor-stator mixer for 5 minutes). Propylene glycol was added and then the mixture was heated to 75°C.

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*Part B:* The ingredients were combined and heated to 70°C. Part B was slowly added to Part A and then homogenized. The mixture was then cooled to 50°C with constant slow mixing.

*Part C:* The components were added at 50°C then cooled below 30°C with continuous mixing before packaging in a non-aerosol spray bottle.

D. 1.0% Co-processed vs. Dry Blend

Formulation Example	2	3
<b>Phase A</b>		
Water	79.4	79.4
Propylene Glycol	5.0	5.0
Avicel PC 611 (coprocessed MCC and CMC)	1.0	-
Dry Blend (MCC+CMC)	-	1.0
<b>Phase B</b>		
C12-15 Alkyl Benzoate	5.0	5.0
Cyclomethicone	3.0	3.0
Cetearyl Alcohol	0.5	0.5
Panthenol	0.5	0.5
Glyceryl Stearate	3.0	3.0
Oleth 20	2.5	2.5
<b>Phase C</b>		
Fragrance	0.1	0.1
Preservative	1.0	1.0

The Procedure:

*Part A:* The Avicel PC 611 and dry blend of MCC/CMC were dispersed into the water using high shear (i.e., rotor-stator mixer for 5 minutes). Propylene glycol was added and then the mixture was heated to 75°C.

*Part B:* The ingredients were combined and heated to 70°C. Part B was slowly added to Part A and then homogenized. The mixture was then cooled to 50°C with constant slow mixing.

*Part C:* The components were added at 50°C then cooled below 30°C with continuous mixing before packaging in a non-aerosol spray bottle.

E. 3.0% Co-processed vs. Dry Blend

Formulation	5	6
<b>Phase A</b>		
Water	79.98	79.98
Avicel PC 611 (coprocessed MCC and CMC)	3.0	-
Dry Blend (MCC+CMC)	-	3.0
<b>Phase B</b>		
Titanium Dioxide	2.0	2.0
C12-15 Alkyl Benzoate	9.0	9.0
Glyceryl Stearate	2.5	2.5
Oleth 20	2.5	2.5
<b>Phase C</b>		
Fragrance	0.02	0.02
Preservative	1.0	1.0

Procedure:

*Part A:* The Avicel PC 611 and dry blend of MCC/CMC were dispersed into the water using high shear (i.e., rotor-stator mixer for 5 minutes). The mixture was heated to 75°C.

*Part B:* The ingredients were combined and heated to 70°C. Part B was slowly added to Part A. The mixture was then homogenized and cooled 50°C with constant slow mixing.

*Part C:* The ingredients were added at 50°C and then cooled below 30°C with continuous mixing before packaging in a non-aerosol spray bottle.

F. All six samples were sprayed on chart paper having a dark background. The nozzle of the spray bottle was kept at a set distance of 10 cm from the surface of the chart paper. The attached photographs were then taken.

G. As can be seen from the attached photographs, in each comparison test, the sprays containing the coprocessed MCC/CMC of the present invention showed unexpectedly better results than the comparative samples using a dry blend of MCC and CMC. That is, in each test, the spray characteristics containing the coprocessed products were finer, less coalesced and did not drip as compared to the comparative samples using the MCC and CMC in a dry mixture. The more coalesced and dripping sprays of the comparative samples performed poorly throughout the tested range. These findings show an

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important and unexpectedly better stability and functionality in a non-aerosol spray throughout the tested range for the composition containing the coprocessed MCC/CMC as compared to the dry blend of MCC/CMC.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful and false statements may jeopardize the validity of the application or any patent issued thereon.

Dated: June 22, 2010

Signed: 

Print Name: W. Preston Brawn